23. (currently amended) The assembly of Claim 2[[1]]2 wherein the valve head is adapted to seal into the valve seat with the leak rate at temperatures up to 1000 degrees centigrade.

29. (cancelled)

48. (cancelled)

50 (new) The assembly of claim 1 wherein the valve head is adapted to self-align into the valve seat with a leak rate of less than or equal to 4 X 10^{-9} atmosphere cc of Helium/sec.

Remarks

1 Double Patenting and Terminal Disclaimer

A terminal disclaimer is submitted as requested by examiner.

2 Assignment does not change, mailing address does.

A statement (PTO/SB/96) under 37 CFR 3.73(b) as required by the terminal disclaimer (PTO/SB/26) and Correspondence Address (PTO/SB/81) is included Note that the parent patent to this continuation application was already assigned and is reflected on the parent patent cover sheet, US patent 6,679,476 for CONTROL VALVES. We are not changing the assignment. We are changing the address

3 Cancelled claims

Claims 5, 29, and 48 are cancelled without prejudice; they were already granted in the parent US patent 6,6790,476.

3 New claims

Claims 50, depending on claim 1, is added.

5 Rejection under 35 USC §112

Claim 23 has been rewritten to depend upon claim 22, which establishes the proper antecedent basis.

6 Rejection under 35 USC §102

Claims 1-4, 6-28, 30-47 and 49 were rejected under 35 USC 102(e) as being anticipated by France et al. (US Patent Number 6,244,566). The applicants believe that France does disclose each limitation of these claims.

France et al. do not disclose at least one flow hole in the first diaphragm assembly that is required in each of these claims. France et al. can not anticipate Noyes et al. because it does not disclose each claim element.

Furthermore, the invention of France et al. would be rendered non-functional for its intended purpose, if the poppet/stem was substantially impermeable as in Noyes et al. If the France stem did not allow flow, then the valve would not allow flow even when it was open.

France el al. disclose a poppet and stem in which gas must flow through the stem in order for the valve to function as intended. The stem must have internal passages in order to function, to allow fluid flow when the valve is open. Without internal through passages in the stem, the invention of France et al. would be rendered non-functional for its intended purpose. France et al disclose in the DETAILED DESCRIPTION OF THE INVENTION at col. 3, lns. 10-13, "The poppet 50 has a stem 56 with an axial passageway 57 extending to the second

open end 52. The axial passageway 57 extends to a juncture with a plurality of radially extending passageways 59." See also Fig. 1, 2, 3, and 5-8. Also see col. 3, lns. 19-21 "... and the passageway 57 to permit the flow of fluid through the body 20 when the poppet 50 is in the open position as shown in FIG. 2." The diaphragms of France do not have at least one flow hole. Instead, the valve relies on the radial (59) and axial passages (57) of the poppet/stem for through flow from inlet to exit. The stem must have the flow hole, otherwise there can be no flow.

The fluid flow in Noyes et al. is not required to go through the stem as in France et al., but instead it goes through at least one flow hole in the diaphragm assembly. The stem of Noyes does not have radial and axial passageways through which the flow must pass. Contrary to France et al., Noyes et al. disclose a poppet (116) and stem (122) that are impermeable. In this usage, impermeable means that the stem does not allow a substantial amount of flow or have a flow path. The stems disclosed in the figures in Noyes et al. specification are impermeable by this definition; they do not have flow passages or flow holes through which fluid can pass. See for example Fig. 1-4, 6B-9, 10, 12, 14-25.

Each of the rejected independent claims in Noyes et al requires "at least one flow hole formed" in the first diaphragm assembly for fluid to flow through the open valve. Also, see for example the parent patent specification US patent 6,679,476, which states at col. 2, lns. 12-15, "At least one flow hole is formed in the first diaphragm assembly and allows a process flow to flow between the first

volume and the second volume." The flow hole in the diaphragm is not disclosed or taught in France. Thus, France et al. can not anticipate Noyes et al.

Conclusion

Applicants respectfully submit that the above arguments traverse the 35 USC §102 rejections in view of France et al. France et al. does not disclose each claim limitation in Noyes et al.

The amendment to claim 23 should overcome the 35 USC §112 second paragraph rejection by correcting the error in depending from the wrong claim, and establishing a proper antecedent basis.

Claims 5, 29 and 48 are cancelled; they were already granted in the parent application.

Applicants believe that the patent should be in condition for allowance.

If it is believed that a telephone conversation with pro se applicant and assignee would be helpful in expediting the prosecution of this application, the Examiner is invited to call the undersigned at (650) 641 3019.

Alexander D. Glew

Sept. 24, 2005

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